

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A system to infer XML schema definitions comprising:
a XML document, the XML document having attribute and data type information; and
an XSD (XML schema definition) inference engine, the XSD inference engine
accepting the XML document as input to process the XML document to generate an XML
schema definition defining elements that appear in the XML document and attributes
associated with the elements, adding the XML schema definition to a collection, accepting a
second XML document as input and determining if the second XML document has forms or
structures that are unincluded in the generated XML schema definition, and if so, modifying
the XML schema definition based on [[a]] the second XML document.

Claim 2 (Original): The system as recited in claim 1, wherein the XSD inference engine
comprises a computing application capable of processing XML documents.

Claim 3 (Previously Presented): The system as recited in claim 2, wherein the XSD inference
engine comprises at least one inference algorithm operating within the constraints of the
XML schema definition language.

Claim 4 (Canceled)

Claim 5 (Previously Presented): The system as recited in claim 1, wherein the second XML
document acts as input to the XSD inference engine along with the inferred XML schema
definition to create a refined XML schema definition.

Claim 6 (Previously Presented): The system as recited in claim 5, wherein the refined XML
schema definition acts as input to the XSD inference engine along with a third XML
document to produce a second refined XML schema definition.

Claim 7 (Currently amended): A method to infer XML schema definitions comprising:

- receiving an XML document as input, the XML document having some attribute and/or data type information;
- determining the attribute and/or data type information present in the XML document;
- generating a schema definition defining elements that appear in the XML document and attributes associated with the elements using the determined attribute and/or data type information;
- adding the schema definition to a collection; and
- receiving a second XML document as input, determining if the second XML document has forms or structures that are unincluded in the schema definition, and if so, modifying the schema definition based on the second XML document.

Claim 8 (Original): The method as recited in claim 7, further comprising making existing attributes optional if it is determined that an attribute does not exist in the XML document.

Claim 9 (Original): The method as recited in claim 8, further comprising determining the content model.

Claim 10 (Original): The method as recited in claim 9, further comprising determining if a new schema is to be inferred.

Claim 11 (Original): The method as recited in claim 10, further comprising setting the attribute to optional for existing content.

Claim 12 (Original): The method as recited in claim 11, further comprising determining if there is white space in the XML document.

Claim 13 (Previously Presented): The method as recited in claim 12, further comprising setting the date and line number to strings in the event that there exists white space in the XML document.

Claim 14 (Previously Presented): The method as recited in claim 12, further comprising determining if a schema definition already exists for the XML document.

Claim 15 (Original): The method as recited in claim 14, further comprising refining the type or inferring the type.

Claim 16 (Original): The method as recited in claim 15, further comprising creating a complex type.

Claim 17 (Original): The method as recited in claim 16, further comprising adding attributes.

Claim 18 (Original): The method as recited in 17, further comprising adding a type.

Claim 19 (Original): A computer readable medium having computer readable instructions to instruct a computer to perform the method as recited in claim 7.

Claim 20 (Previously Presented): A computer readable medium having computer readable instructions to instruct a computer to perform the method as recited in claim 18.

Claim 21 (Currently amended): A computer readable medium having computer readable instructions to instruct a computer to generate an XML schema comprising:

an inference algorithm, the inference algorithm operating on XML data to identify data types and attributes and generating an XML schema defining elements that appear in the XML data and attributes associated with the elements using such type and attribute information in conjunction with XSD (XML schema definition) language parameters and constraints, adding the XML schema to a collection, receiving additional XML data and determining if there exists forms or structures in the additional XML data that are unincluded in the XML schema, and if so, modifying the XML schema based on the additional XML data.

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Claim 22 (Previously Presented): The computer readable medium as recited in claim 21, wherein the inference algorithm is part of a computing application for use in XML data processing.